Molecular Diagnostics

Adenovirus Direct Detection by Real Time PCR

Specimen Requirements: Respiratory specimen in Microtest Transport Media**.** .

Turn Around Time: 1 to 3 working days. Results are telephoned to the submitter.

CPT Code: 87798
Price: $95.00

Transport Temperature: 2-8°C

Anthrax (see *Bacillus anthracis* in the Microbiology, Reference Section)

Bacillus anthracis Rapid Test Methods (see *Bacillus anthracis* in the Microbiology, Reference Section)

Bordetella pertussis/Bordetella parapertussis Direct Detection by Real Time PCR

Specimen Requirements: Nasal washings or nasopharyngeal (NP) swab in a sterile container. Do not submit a throat or nares specimen.

Turn Around Time: 1 to 2 working days. Positive results are telephoned to the submitter.

NOTE: PCR testing should be performed only on symptomatic patients; a positive PCR in an asymptomatic patient does not meet the standard CDC case definition and cannot be considered a case of pertussis. PCR testing may be able to detect *B. pertussis* 3 to 4 weeks post onset, and after antibiotic therapy has been initiated.

CPT Code: 87798
Price: $95.00

Transport Temperature: 2-8°C for nasal washings, ambient for NP swabs

Brucella spp. Rapid Test Methods (see *Brucella spp.* in the Microbiology, Reference Section)

Burkholderia mallei, B. pseudomallei Rapid Test Methods (see *Burkholderia mallei, B. pseudomallei* in the Microbiology, Reference Section)

Enterovirus (Pan-Enterovirus) Detection by Nucleic Acid Amplification Testing

Specimen Requirements: CSF in a sterile transport container, raw stool in a sterile transport container, respiratory specimens (solid or swabs).

Turn Around Time: 1 to 3 working days. Positive results are telephoned to the submitter.
CPT Code: 87498
Price: $89.25

Transport Temperature: 2-8°C

Francisella tularensis Rapid Test Methods (see *Francisella tularensis* in the Microbiology, Reference Section)

Herpes Simplex Virus, Type 1 and 2, Direct Detection by Real Time PCR

Specimen Requirements: CSF, Cervical Swab or Lesion swab in Microtest Transport Media.

Turn Around Time: 1 to 3 working days. Positive results are telephoned to the submitter.

CPT Code: 87529
Price: $95.00

Transport Temperature: 2-8°C

Influenza A and B Virus Direct Detection by Real Time PCR

Specimen Requirements: Respiratory specimen in Microtest Transport Media.

This test detects Influenza B and all subtypes of Influenza A, including seasonal 2009 H1N1, and H5 Avian Influenza. All Influenza A positive specimens will be reflexed to real-time PCR subtyping.

Turn Around Time: 1 to 3 working days. Positive results are telephoned to the submitter.

CPT Code: 87798 x 2
Price: $95.00 each

Transport Temperature: 2-8°C

Influenza A Sub-typing by Real Time PCR

Specimen Requirements: Nucleic acid derived from a PCR specimen screened positive for Influenza A. Reflex testing is performed on all Influenza A positive specimens.

*Testing is performed at no cost for epidemiological purposes.

Turn Around Time: Sub-typing is performed each working day. Results are telephoned to the submitter.

Price: Fee Waived*

Transport Temperature: 2-8°C

Mycobacterium tuberculosis complex Direct Detection by Nucleic Acid Amplification

Specimen Requirements: Processed concentrated specimen or primary respiratory specimen.

Turn Around Time: 1 to 3 working days. Call ahead to make testing arrangements. Results are telephoned to the submitter.

NOTE: The submitter of an AFB smear positive respiratory specimen will be contacted by the laboratory and offered the direct nucleic acid amplification test for *M.tuberculosis* complex (MTD Test).

Testing will also be performed on culture negative specimens if the index of suspicion of Tuberculosis is high.

CPT Code: 87556
Price: $183.75

Transport Temperature: Ambient

Norovirus Direct Detection by Nucleic Acid Amplification

Specimen Requirements: 2 mL stool in a sterile container. .

Turn Around Time: 1 to 3 working days. Positive results are telephoned to the submitter.

CPT Code: 87798
Price: $95.00

Transport Temperature: 2-8°C

Orthopoxvirus, including Variola (Smallpox), Direct Detection by Real Time PCR

Specimen Requirements: Lesion swab in Microtest Transport Media plus an additional lesion swab transported dry in a sterile container. Call the laboratory for special instructions regarding environmental samples.

A suspect Orthopoxvirus requires Infectious Disease packaging (Class 6.2) and trackable shipping. Please notify the laboratory by telephone at time of shipment.

Turn Around Time: 1 to 3 working days. Results are telephoned to the submitter.

CPT Code: 87798
Price: Fee Waived

Transport Temperature: 2-8°C

Orthopoxvirus, Other Than Variola, Direct Detection by Real Time PCR

Specimen Requirements: Lesion swab in Microtest Transport Media plus an additional lesion swab transported dry in a sterile container.

Turn Around Time: 1 to 3 working days. Results are telephoned to the submitter.

CPT Code: 87798
Price: Fee Waived

Transport Temperature: 2-8°C

Plague (see *Yersinia pestis* in the Microbiology, Reference Section)

Ricin Rapid Tests

Specimen Requirements: Environmental samples only

Turn Around Time: 1 to 3 working days. Call the laboratory prior to sending sample. Results are telephoned to the submitter.

CPT Code: None
Price: Fee Waived

Transport Temperature: Ambient

Staphylococcus Enterotoxin B Rapid Tests

Specimen Requirements: Environmental samples only

Turn Around Time: 1 to 3 working days. Call the laboratory prior to sending sample. Results are telephoned to the submitter.

CPT Code: None
Price: Fee Waived

Transport Temperature: Ambient

Toxic Screen, Rapid Chemical Exposure

Call ahead for information on proper collection, packaging, and transport and shipment of blood and urine specimens. Prior arrangements must be made with the laboratory.

Referred to the Centers for Disease Control, Atlanta, Georgia
Turn Around Time: 36 hours

CPT Code: None
Price: Fee Waived

Varicella Zoster Virus Direct Detection by Real Time PCR

Specimen Requirements: Vesicular lesion swab in Microtest Transport Media.

Turn Around Time: 1 to 3 working days. Positive results are telephoned to the submitter.

CPT Code: 87798
Price: $95.00

Transport Temperature: 2-8°C

Yersinia pestis Rapid Test Methods (see *Yersinia pestis* in the Microbiology, Reference Section)

Molecular (Nucleic Acid Amplification) Testing Collection and Transport

For technical assistance in determining proper specimen selection for specific agents, call the laboratory at 800-821-7284.

Microtest Transport Media for Viral Agents is supplied by the laboratory. Store the kits at room temperature.

Bronchial Alveolar Lavage (BAL) /Bronchial Washings	For Viral Agents, mix an equal portion of the BAL with Microtest Transport Media. Store in cold conditions and ship on cold packs. For Bacterial Agents, collect in sterile container. Store in cold conditions and ship on cold packs.
Cerebral Spinal Fluid	Place 1 – 2 mL in sterile container without transport. Store in cold conditions and ship on cold packs.
Cervical Swab	Place swab into Microtest Transport Media, break off at the score line, and tightly cap. Store in cold conditions and ship on cold packs.
Nasopharyngeal Aspirate	Introduce 1-2 mL of sterile saline into the nasopharyngeal cavity, aspirate into sterile vial. Store in cold conditions and ship on cold packs. ***Note: If the specimen is also being submitted for viral agents, please submit in Microtest Transport Media. Store in cold conditions and ship on cold packs.*
Nasopharyngeal Wash	Use only sterile saline to collect the NP wash. Instruct the patient to sit with head slightly tilted backwards, and to hold the sterile collection cup. Instruct the patient on how to constrict the muscles at the back of the throat by saying the "K" sound rapidly and repetitively. Inform the patient that this process may prevent the saline from draining down the throat. Fill a 5 cc syringe with warm sterile saline. Gently push the tip of the patient's nose back with your thumb, and quickly inject 1 – 2 mL of sterile saline into each nostril. Instruct the patient to contain the saline in the nostrils for approximately 10 seconds while repetitively saying the "K" sound. After 10 seconds, ask the patient to tilt their head forward and collect the saline in the sterile cup. Cap the washings tightly. Refrigerate the nasopharyngeal washings until transport and ship on cold packs. **Note: If the specimen is also being submitted for viral agents, please submit in Microtest Transport Media. Store in cold conditions and ship on cold packs.*
Nasopharyngeal Swab	Use a flexible wire dacron or polyester swab. Do not use Calcium Alginate swabs. Instruct the patient to sit with head slightly tilted backwards. Bend the flexible wire in a small arc, and insert the swab into the nostril back to the nasopharyngeal cavity. The patient's eyes will momentarily tear. Slowly rotate the swab as it is being withdrawn. For Viral Agents, place swab into Microtest Transport Media, trim swab shaft, and tightly cap. Store in cold conditions and ship on cold packs. For Bacterial Agents, place swab in sterile tube without transport.
Serum	Collect 5-10 mL of whole blood in serum separator tube. Allow blood to clot, centrifuge and aliquot resulting sera. Store in cold conditions and ship on cold packs. If serum has already been frozen, ship on dry ice.
Stool	Collect at least 2 mL of stool in a leak-proof, clean, dry container. Do not add transport media. Store in cold conditions and ship on cold packs.
Throat Swab	Use a plastic shafted Dacron swab. Do not use Calcium Alginate swabs. Using a tongue depressor, insert the swab and vigorously rub the tonsils and the posterior pharynx. Carefully remove the swab, not touching any area of the mouth. For Viral Agents, place swab into Microtest Transport Media, trim

	swab shaft, and tightly cap. Store in cold conditions and ship on cold packs. For Bacterial Agents, place swab in sterile tube without transport.

Tissue Specimens Autopsy or Biopsy	For Viral Agents, place each specimen in separate sterile containers containing small amounts of Microtest Transport Media. Store and ship on cold packs or dry ice. *Do Not submit formalized tissue.* For Bacterial Agents, place each specimen in separate sterile containers containing small amounts of sterile saline or PBS. Store and ship on cold packs. *Do Not submit formalized tissue.*
Vesicles/Vesicular Fluid/ Scrapings	Aspirate fluid from multiple fresh unbroken vesicles and place into 1-2 mL of Microtest Transport Media. Remove the top of the vesicle and place the skin of the vesicle top into a sterile tube without transport. Store both samples in cold conditions and ship on cold packs.
Whole Blood	Collect 5 -10 mL whole blood in EDTA anticoagulant. Store in cold conditions and ship on cold packs.

Make certain tube is labeled with patient identifier, collection date and specimen source. Place each specimen container in an individual biohazard zip lock bag containing absorbent material and seal bag tightly.

Fill out the standard laboratory request form completely and place in the outer sleeve of the biohazard zip lock bag. Do not place the request form inside the biohazard zip lock bag.

Ship specimens promptly, maintaining cold temperature from collection until receipt at the laboratory. For those specimens that must be shipped in a cold condition, use cold packs and Styrofoam containers. Mailers will be returned for reuse. Transport by mail or courier.

Mycobacterium spp. (AFB or TB) Testing Collection and Transport

All specimens are potentially infectious; handle carefully.

Sputum or Nebulized Sputum	Collect three early morning specimens on successive days (within 48 hours) and submit daily in separate containers. Good specimens are material brought up by the lungs after a productive cough or nebulization. Send a minimum of 5 mL in a sterile container.
Urine	Collect multiple first morning "clean catch" specimens on three successive days. Send a minimum of 40 mL in a sterile container.
Gastric	Collect three early morning fasting specimens on successive days. Send a minimum of 10 mL in a sterile container. Add 10 mg of sodium bicarbonate to neutralize the acidity. Send promptly after collection; these specimens should be processed as soon as possible.
Bronchial Washings	Submit first sputum specimen following bronchoscopy as well as the bronchial washings. Send a minimum of 5 mL in a sterile container.
Tissues	Collect aseptically and place in sterile container. Add about 1 mL sterile broth or sterile saline to tissues and swabs to prevent dehydration.
CSF or Other Sterile Body Fluids	Submit in sterile collection tube; at least 2 mL is needed for an adequate test.
Blood or Bone Marrow	Collect in heparinized tube or add sterile heparin (0.2 mg/mL) to prevent clotting. Send a minimum of 1 mL in a sterile container.
Stool	Submit 1 gram of raw stool in a sterile container. Send on ice.
Swab (Not Optimal)	Specimens submitted on swabs are discouraged. Please make every effort to submit tissue or aspirated fluid, as these are preferred sources.

Use only sterile materials in the collection of the specimen. Collect specimen directly into the sterile bottle provided or into a sterile container, refrigerate specimen until transported, and send as soon as possible. Make certain that the container is labeled with patient identifier and collection date.

Screw lid onto specimen container tightly so specimen does not leak; place each specimen container in an individual biohazard zip lock bag containing absorbent material and seal bag tightly.

Fill out the standard laboratory request form. Place form in outside sleeve of biohazard zip lock bag and put into TB mailing container. Respiratory specimens should be packaged and transported cold by mail or courier. All other specimens may be transported at ambient temperature